

(http://gateway.nlm.nih.gov)

Introduction

What?

- Allows you to simultaneously initiate searches in multiple NLM retrieval systems using a single search interface.
- The NLM Gateway was developed by the Lister Hill National Center for Biomedical Communications (LHNCBC) at the National Library of Medicine (NLM), located at the National Institutes of Health (NIH)
- Phased implementation:

Phase I

Journal Citations: MEDLINE (PubMed), OLDMEDLINE

Books/Serials/AVs: LOCATORplus

Meeting Abstracts: HIV/AIDS-related meeting abstracts

Health Services Research-related meeting abstracts

Space Life Sciences meeting abstracts

Consumer Health: MEDLINE plus Health Topics

MEDLINE plus Drug Information

DIRLINE (Directory of Health Organizations)

Other Collections: HSRProj (Health Services Research Projects in Process)

Later phases

Clinicaltrials.gov

HSTAT (Health Services/Technology Assessment Texts)

- NLM Gateway is the *only* search interface for the following resources:
 - Meeting Abstracts
 - OLDMEDLINE
 - HSRProi
- Other systems (PubMed, LOCATOR*plus*, MEDLINE*plus*) will retain their own search interfaces.

Who?

Potential Gateway users could be:

- Users new to NLM's online resources who do not know what type of information is available or how to best search for it.
- Users who want "one-stop searching."
- Users who want to search resources that are only in the NLM Gateway.

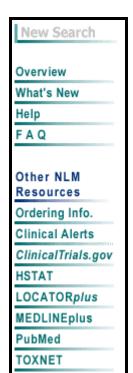
Where?

- Click on Health Information from the NLM home page. Then Click on NLM Gateway at the next screen.
- gateway.nlm.nih.gov

Gateway Home Page

Sidebar

New Search takes you to the search screen.



- **Overview** provides a brief overview of the Gateway.
- What's New gives users the latest news about the Gateway.
- **Help** provides detailed information about how to use the Gateway.
- **FAQ** are Frequently Asked Questions about the Gateway.

Other NLM Resources:

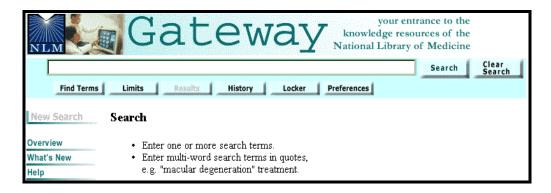
- Ordering Info. is a link to the Loansome Doc feature that allows users to order full-text copies of articles from a local medical library (local fees and delivery methods may vary).
- Clinical Alerts expedite the release of findings from the NIH-funded clinical trials where such release of findings could significantly affect morbidity and mortality.
- Click on *ClinicalTrials.gov* to access the NIH/NLM web site for current information about clinical research studies.
- **HSTAT** links to Health Services/Technology Assessment Text system.
- **LOCATOR***plus* links to the NLM catalog of books, journals, and audiovisuals.
- **MEDLINE** plus links to the NLM consumer health web site.
- PubMed links to PubMed (MEDLINE).
- **TOXNET** links to NLM's web site of toxicology and hazardous chemicals databases.

The Footnote



- Click on **Contact Us** to send an e-mail message to NLM Customer Service.
- Click on U.S. National Library of Medicine, National Institutes of Health, Department of Health & Human Services to access the Web pages of the agencies responsible for the creation and maintenance of the NLM Gateway.
- Click on **Freedom of Information Act** to link to NIH's Freedom of Information Act (FOIA) home page.
- Click on **Privacy Policy** to link to NLM's Copyright and Privacy Notice statements.

Searching



- Enter the search term in the query box.
- Click on the Search button.



The query box is available from every screen. You do not have to return to the homepage to enter a new search

Subject Searching Tips:

- The default Gateway search is a subject search.
- You may enter one or more terms (e.g., "vitamin C" "common cold" "shortness of breath") in the query box and click on the Search button.



To indicate a phrase enter double quotes ("") around the phrase, e.g., "vitamin C". Be sure to include **all** phrases including author names, MeSH terms, etc. in double quotes.

Search terms are automatically combined (ANDed) together.



Search terms are mapped to MeSH (Medical Subject Headings) terms. For example, if you enter "heart attack", the phrase is mapped to "myocardial infarction". "Myocardial Infarction" is searched as a MeSH term in addition to "heart attack" being searched as text words. This mapping helps to provide more comprehensive results.

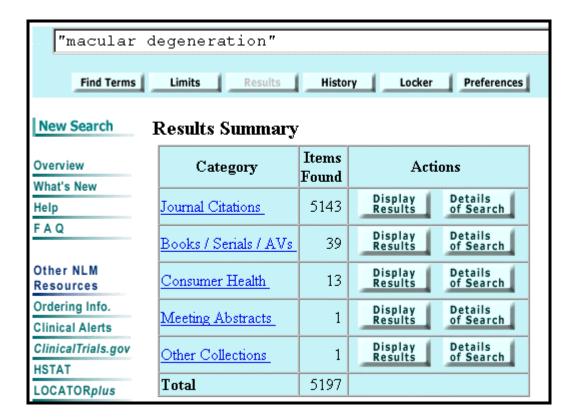
Results

Results Summary

When you click Search, the Gateway displays the Results Summary that includes:

- The number of **Items Found** in each category
- A **Display Results** button for each category to see the retrieved items for each category
- A **Details of Search** button for each category to see how the Gateway translated your search strategy for each category.

Results Summary for "macular degeneration" search:



Results Screen

Click on **Display Results** for the **Journal Citations** category; the Gateway displays the Results Screen:

Arrows navigate Results forward/backward. Journal Citations (2 collections searched) Put in Deselect All Download Jump to Page or Display button - fill in the Displaying items 1 - 20 of 5143 found page number. Page 1 of 258 Jump to Jump to Jump to Collection Pick A Collection Pagė **Collection** allows jumping to the two journal 1 Intravitreal triamcinolone for refractory cystoid macular edema secondary to collections. birdshot retinochoroidopathy. П Use check boxes to Martidis A, Duker JS, Puliafito CA. select multiple Expand Arch Ophthalmol. 2001 Sep;119(9):1380-3. No Abstract Available. items. Then click on Download or PMID: 11545651 [PubMed - indexed for MEDLINE] Related Display. Articles From PubMed The Put in Locker Medication use and the 5-year incidence of early age-related maculopathy: the 2 button puts Beaver Dam Eye Study. selected items in Klein R, Klein BE, Jensen SC, Cruickshanks KJ, Lee KE, Danforth LG, Tomany SC. your locker. Expand Arch Ophthalmol. 2001 Sep;119(9):1354-9. Expand will take PMID: 11545642 [PubMed - indexed for MEDLINE] Related you to a fuller Articles From PubMed display for that individual citation. 3 The effect of axial length on laser spot size and laser irradiance. П Related Articles Stur M, Ansari-Shahrezaei S. takes you to a set Arch Ophthalmol. 2001 Sep;119(9):1323-8. Expand of citations closely PMID: 11545638 [PubMed - indexed for MEDLINE] related to the Related From PubMed selected article. Articles

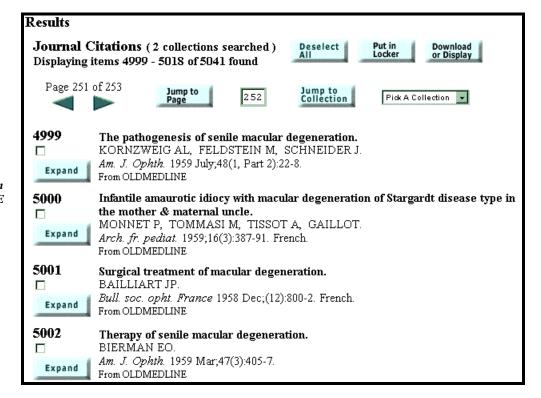
Jumping to OLDMEDLINE collection

- Use **Pick A Collection** pull-down
- Select **OLDMEDLINE**
- Click **Jump to Collection** button.



Results:

Gateway takes you to the screen where the OLDMEDLINE citations begin.



Notice the **From OLDMEDLINE** statement.

Display Formats

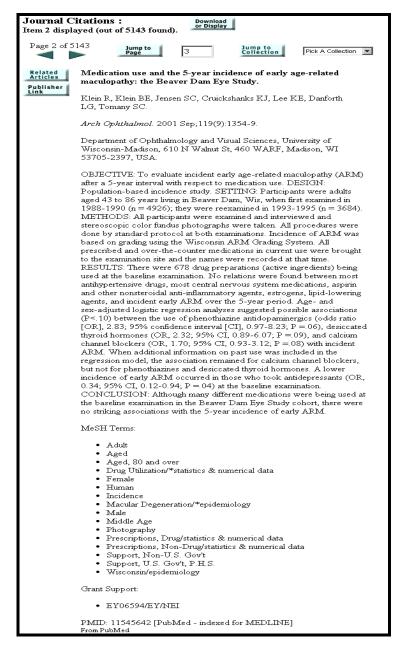
- Gateway citations are initially displayed in a Brief format.
- The **Expanded Format** Provides more information.



A table of all collections and the data elements found in the brief format and expanded format for each is available in Help.

Expanded Format

Notice the
Related
Articles link
and the
Publisher Link
for full-text.
These links are
only on
PubMed
citations.



Details of Search

• Details of Search lets you view your search strategy as it was translated using the Gateway's automatic term mapping and search rules and syntax.

 Details of Search contains v 	warning and	error messages.
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PubMed Translated Search (("macular degeneration" [MeSH Terms]) OR (macular degeneration [Text Word]))	
(("macular degeneration" [MeSH Terms]) OR (macular degeneration [Text Word]))	Items
//	4998
OLDMEDLINE	
Translated Search	Items
("macular degeneration" <exact> <in> KEYWORD_LIST OR "macular degeneration" <in> TITLE OR "macular degeneration" <in> PERSONAL_NAME_AS_SUBJECT OR "macular degeneration" <in> KEYWORD_LIST)</in></in></in></in></exact>	43

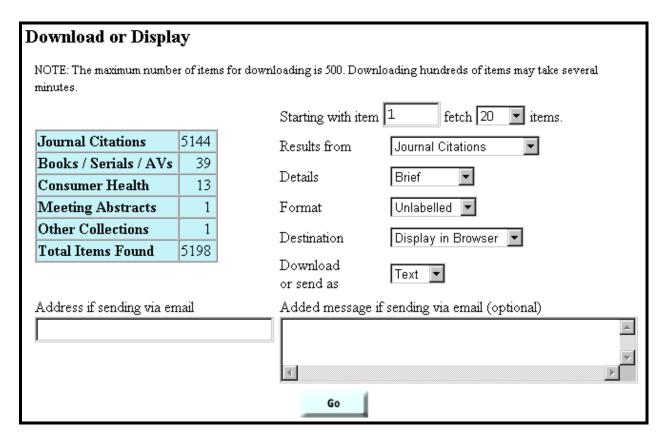
Saving search strategies



- Below the Details of Search is a **URL button**. To save the search strategy, click on the URL button. A new browser window will open with the Results Summary page for the search.
- Use the Bookmarks or Favorites feature to save the search, and then close the browser window and continue with Gateway searching.

Download or Display

- Select citations you wish to download or display further.
- Click the **Download or Display** button.
- Make your selections from this screen.
- Click Go.



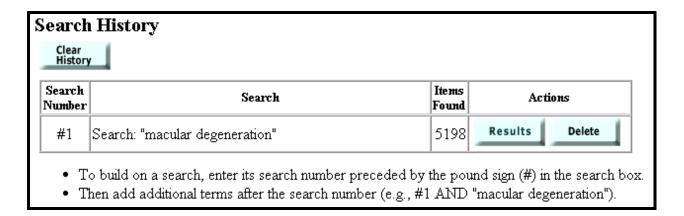
- Use the **Fetch** pull-down menu to select the number of items to download or display. The maximum number of items for downloading/displaying at one time is 500.
- Use the **Results from** pull-down menu to select the items to be downloaded/displayed. Choices are All Categories, any single category, Selected Items or Locker items. The default items are the items last viewed.
- Use the **Destination** pull-down menu to select the destination for the items to be downloaded or displayed. Choices are Display in Browser, Display for Printing, Save to File, and Send via Email. The default destination is Display in Browser.
- Use the **Details** pull-down menu to select the display format. Choices are Brief, Expanded, and Complete. The default details is Brief.
- Use the Format pull-down menu to select. The default Format is Unlabelled.
 Labelled = labels each field with the full field name.
 Export = labels each field with the field name abbreviation. The Export format is used for importing data into bibliographic management programs.
- Use the **Download or send as** pull-down menu to select Text or Html. The default is Text.
- If sending by email, enter **Address**. Enter optional **Added message** in the adjoining box.

Download or Display Tips:

- ✓ **Display for Printing** allows you to display your citations as ASCII text without the sidebar menu and toolbars on each page.
- ✓ Use the print function of your Web browser to print all of the information and citations displayed on your web page.
- ✓ You can only print citations from the displayed page.
- ✓ If you choose **Send via Email**, you must enter an email address before clicking on the Go button. An accompanying message may be entered in the box provided.
- ✓ The **Download or send as** option applies only to the Save to File and Send via Email destinations.

Search History

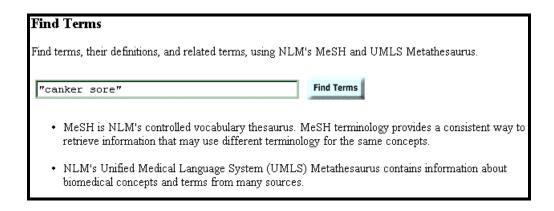
- Click on **History** directly beneath the query box.
- Shows the search strategies and results for the last 25 searches run in the Gateway.
- Once the maximum number of searches has been reached, the Gateway will remove the oldest search from the History to add the most current search.
- You can use the Search Number in a subsequent search (e.g., #1 AND zinc).
- Your Search History will be lost when you close your web browser.



Find Terms

- Use Find Terms to select terms from the MeSH vocabulary and the Unified Medical Language System (UMLS).
- Click on Find Terms directly below the query box.

On the initial Find Terms screen, type the term you want to find, e.g., "canker sore ":



After typing in your term and clicking on Find Terms, you see the screen shown on the next page.

Note the definition.

Click on **Related Concepts** to see other related terms.

Click on View MeSH Information for additional details about the term.

Use the Add to Search button and the Connector pull-down to add this term to your search strategy.

Use the Main point of item checkbox to limit the term to the main point of the article.

Use the **Do not explode** this term checkbox to turn off automatic explosion in PubMed.

Click on **Subheading Definitions** if you need to check a subheading definition.

Select subheading(s) to attach to your term by clicking on the checkbox.

Note the MeSH hierarchical tree structure(s) where the term is found.

lesions, single or multiple, round or oval. Two to ei days and then heal without scarring. (From Jablon Related Concepts View MeSH Information	
With Subheadings: Subheading Definitions AND	or Cancel
blood cerebrospinal fluid chemically induced classification congenital diagnosis diet therapy drug therapy economics embryology enzymology epidemiology ethology ethology genetics history immunology metabolism	microbiology mortality nursing parasitology pathology physiopathology prevention & control psychology radiography radiotherapy rehabilitation surgery therapy ultrasonography urine virology
MeSH Tree 1 All MeSH Categories Diseases (MeSH Category) Stomatognathic Diseases Mouth Diseases Stomatitis Stevens-Johnson Syndrome Stomatitis, Aphthous Stomatitis, Denture Stomatitis, Herpetic	

Adjust the Canker sore search by adding the subheading, **diet therapy**:

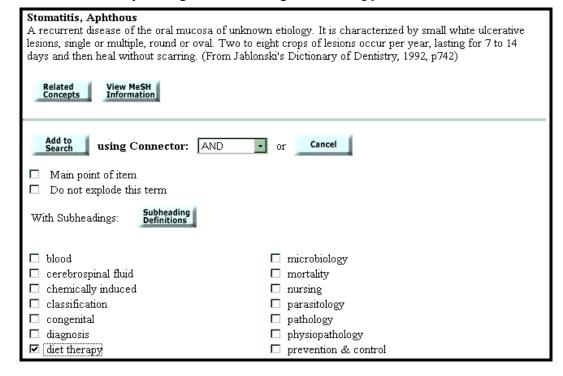
"checked".

Then click on the Add to Search button using the default connector,

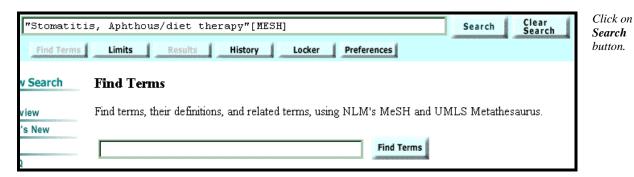
AND.

Diet therapy

subheading is



This brings you to the following screen:

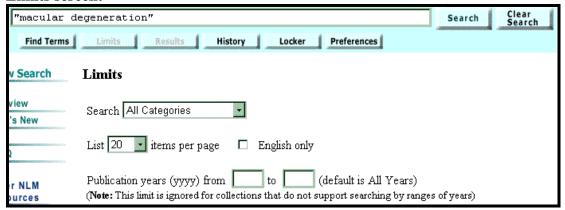


Click on **Search** to have the Gateway run your search.

Limits

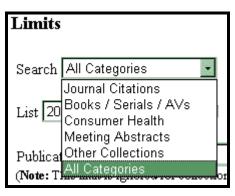
• Click on Limits directly below the query box.

Limits screen:



Search Categories

- Search All Categories is the default.
- Use the Search All Categories pull down to change the category searched.
- You may search all categories or one category.



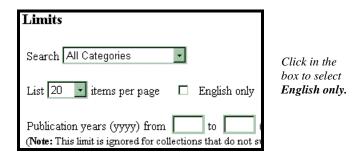
List Items per Page

- 20 items per page is the default.
- Use the List items per page pull down to change the number of items displayed.



English Only Limit

- Searching all languages is the default.
- Use the English only option to limit your search to English language items only.

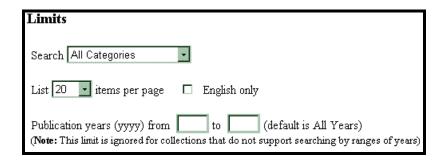




This limit is ignored in the HSRProj collection (Other Collections), MEDLINE plus Health Topics collection (Consumer Health), the MEDLINE plus Drug Information collection (Consumer Health), and the DIRLINE collection (Consumer Health).

Publication Date Limit

- Searching all years is the default.
- Use the from/to boxes to limit your search to specific publication years.
- One publication year or a year range may be searched.
- A publication year or year range must be searched using the format YYYY (e.g., from 1998 to 2000).



Fill in the Publication Year range.



This limit is ignored in the MEDLINE plus Health Topics collection (Consumer Health), the MEDLINE plus Drug Information collection (Consumer Health), and the DIRLINE collection (Consumer Health). Only one publication year may be searched in the LOCATOR plus collection (Books/Serials/AVs). If a year range is entered, it will be ignored. You may limit by project year in the HSRProj collection (Other Collections) using the publication date field qualifier. All intermediate years as well as the initial year and final year will be searched.

Locker

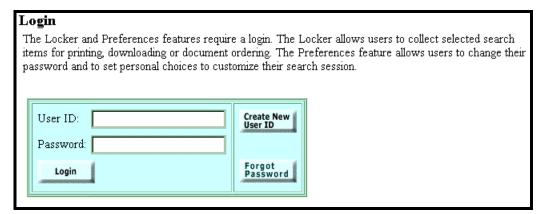
- A place to collect your selected search items, e.g., mark items and store them in your locker for printing, downloading or ordering
- You must login to use the Locker. Login requires a user ID and password. Registration is free

Locker Login

If you do not have a User ID, click on the Create New User ID button.

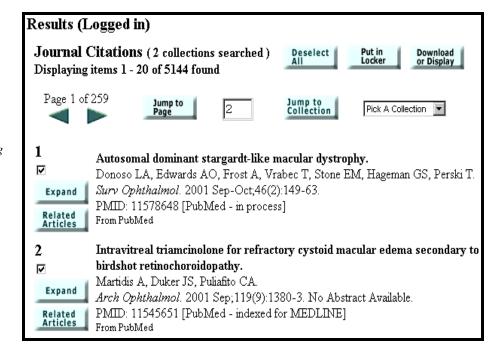
OR

Enter your User ID and Password to Login.



Marking and putting items in your Locker

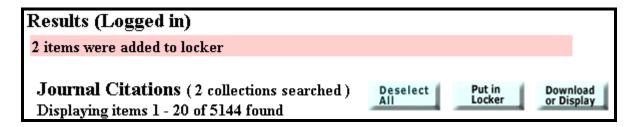
- Use the check boxes to select the items you wish to store in your locker.
- Click on **Put In Locker** button.



Mark the items using the check boxes.

Click on **Put in Locker** button.

• Gateway confirms that the items are added to your Locker with the following message.



• Click on Locker directly below the query box to see the contents of your Locker.

Note the green check Locker (Logged in) indicating document delivery is available. Document delivery is available for items marked 🗸 . Use check box to select one or Order Documents Download or Display Delete more items. Intravitreal triamcinolone for refractory cystoid macular edema secondary to 1 🗆 Use the Order Documents birdshot retinochoroidopathy. button to order documents using Loansome Doc. Martidis A, Duker JS, Puliafito CA. Arch Ophthalmol. 2001 Sep;119(9):1380-3. No Abstract Available. Use the **Delete** button to delete PMID: 11545651 [PubMed - indexed for MEDLINE] selected items. If no items are From PubMed selected, it will delete all items in the locker. Autosomal dominant stargardt-like macular dystrophy. Use the **Download** or **Display** Donoso LA, Edwards AO, Frost A, Vrabec T, Stone EM, Hageman GS, Perski T. button to download or display Surv Ophthalmol. 2001 Sep-Oct;46(2):149-63. items in your Locker. PMID: 11578648 [PubMed - in process] From PubMed

Locker Tips:

- ✓ If an item is already in your Locker, it will not be added again.
- ✓ Locker items remain until you delete them.
- ✓ There is a limit of 500 items that may be stored in your locker.

Preferences

- Click the Preferences button directly below the query box to access the Preferences page.
- Preferences allows you to change your password and customize your search settings, results screen, download and display options, and Locker settings.



- You must login to use Preferences. The same User ID/password works for both the Gateway Locker and the Preferences features.
- Loansome Doc User Ids acquired before 2001 are valid and may be used here in the Gateway.

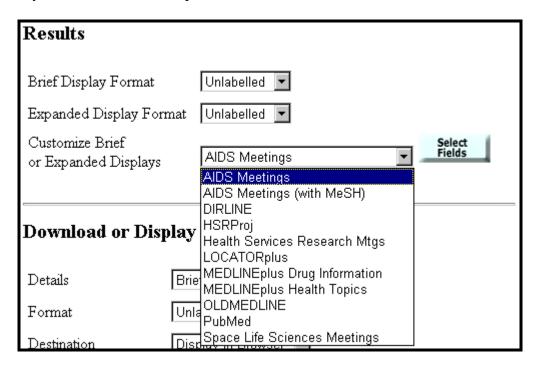


- Use the **Apply to this Session** button to apply changes only to your current Gateway session.
- Use the **Save Preferences** button to apply changes to your current and future Gateway sessions.
- Use the **Restore Defaults** button to return all settings to the Gateway default settings.
- Use the **Cancel** button to quit your preferences session without making any changes.

NOTE: The workbook pages will highlight two areas of Preferences. The Gateway's Help feature (available from the sidebar) clearly explains *all* the Preferences selections and options within each selection.

Results Preferences

- Use this Preferences option to customize your field selections in your displays for the various collections.
- Make your selection from the pull-down menu and click on the **Select Fields** button.



The graphic on this page and the following page show the PubMed field selection screen.

The check marks represent the default field selections for the Brief and Expanded display formats.

Define PubMed Fields (Logged in) Customize Brief or Expanded Displays PubMed Apply to this Session Restore Defaults Click in the Save Preferences Cancel to " check " your field Expanded **Brief Format** Field Name selections. **Format** П $\overline{\mathbf{v}}$ Abstract To Deselect $\overline{\mathsf{v}}$ Abstract Available click on the Affiliation $\overline{\mathsf{v}}$ $\overline{\mathsf{v}}$ $\overline{\mathsf{V}}$ Author appropriate П Citation Subset button to П Collective Name save your selections. Comment in Comment on Copyright Information Country Date Completed Date of Electronic Publication Date Revised ☑ Digital Object Identifier Entrez Date Entry Date Erratum in V V Full Text URL Gene Symbol Grant Support ISSN V V Issue/Part/Supplement Journal Title Code $\overline{\mathbf{v}}$ V Language MeSH Date

boxes

a field,

check.

Click on

Continuation of the Define PubMed Fields screen:

	✓	MeSH Terms
		NLM Unique ID
		Number of References
V	✓	Pagination
	✓	Personal Name As Subject
V	V	Publication Date
		Publication History
V	V	Publication Status
	V	Publication Types
		Publisher Identifier
		Publisher Identifier Controlled
		Publisher Link
Required	Required	PubMed ID (PMID)
V	✓	Record Status
		Republished from
		Republished in
		Retraction in
		Retraction of
	V	Secondary Source ID
		Source
	V	Substances
		Summary URL
V	V	Title
V	V	Title Abbreviation
		Transliterated / Vernacular Title
V	፟	Unique Identifier
		Update in
		Update of
V	✓	Volume Issue

Locker Preferences

- Locker items remain until you delete them.
- If you plan to order documents using the Gateway, you may wish to set your preferences to Remove items from your Locker after they have been ordered.

Locker				
	Remove items from your Locker after they have been ordered.			
	Send orders for the first ten unordered items in the Locker.			

Searching by Fields

- All field qualifiers should be entered *after* the search term` or terms (postqualification same as PubMed).
- Field qualifiers must be in square brackets.
- Field qualifiers may be in upper or lower case.

Examples:

```
"common cold " AND "vitamin c"[mh] spanish [LANGUAGE]
"lead screening"[text] AND children
```



The Gateway's **Help** lists all available search fields and their available abbreviations.

Author Name Searching

- Enter the author name in the format last name plus initials (no punctuation), followed by the field qualifier (i.e., [au]).
- Author names *must* be enclosed in quotes.

Examples:

- "Harris MI" [AU]
- "Charron-Prochownik D" [au] "Siminerio LM" [au]
- "Ferris FL 3rd" [author]
- "Kovacs" [AUTHOR]
 - Author searching has not been implemented for the LOCATORplus collection (Books/Serials/AV's) in the current Gateway release. Search using an author's last name without a field qualifier in order to attempt to search by author in LOCATORplus.



- You may search for investigators in **HSRProj** collection (Other Collections) using the author field qualifier. Investigator names in the HSRProj collection are displayed as full names, but must be searched in the format last name plus initials (no punctuation)
- The **MEDLINE***plus* **Health Topics** collection (Consumer Health) and the **MEDLINE***plus* **Drug Information** collection (Consumer Health), and the **DIRLINE** collection (Consumer Health) do not have authors.

Title Searching

- Enter one or more title words followed by the field qualifier (i.e., [ti]).
- Phrases *must* be enclosed by quotes.

Examples:

```
AIDS [TITLE] "sexually transmitted diseases" [TITLE] "lyme disease" [ti] "quality of life" [title] "managed care" [ti] quality [ti]
```

MeSH Searching

- Enter the MeSH term followed by the field qualifier (i.e., [mh]).
- MeSH terms that are multiple words *must* be enclosed in quotes.
- Subheadings may be entered in full, or the two-character abbreviation may be used.
- To search for a MeSH term with one or more subheadings, enter the MeSH term, a forward slash, and one or more subheadings, followed by the field qualifier (e.g., [MESH]). If multiple subheadings are entered for one MeSH term, the subheadings are ORed together (e.g., "myocardial infarction/su/dt" [mh] is equivalent to "myocardial infarction/su" [mh] OR "myocardial infarction/dt" [mh]).

Examples:

```
"lyme disease"[mh]
"macular degeneration/therapy" [mesh]
"myocardial infarction/su/dt" [mh]
" Lice" [mh]
```



- Explosions: If a MeSH term or MeSH major topic is entered, it will be automatically exploded in PubMed (Journal Citations) only.
- For other collections, MeSH terms and MeSH major topics are *not* exploded.

Boolean Operators

- The Boolean operators AND, OR, and NOT are available.
- The default boolean operator is AND.
- Boolean operators AND, OR, and NOT must be in upper case (e.g., "vitamin c" OR zinc).
- The Gateway processes the AND and OR Boolean operators in a left-to-right sequence.
- The NOT operator is processed first.
- Nesting: You can change the order in which the Gateway processes the AND and OR operators in a search statement by enclosing the unit in parentheses. The terms inside the set of parentheses will be processed as a unit and then incorporated in the overall strategy.

Examples:

"common cold" AND ("vitamin c" OR zinc)
"hay fever" AND (Claritin OR Zyrtec)

NOTES

Practice Exercises

- 1. Locate information on holistic health and AIDS or holistic health and HIV.
- 2. Using the Find Terms feature (MeSH Browser), find items about fibromyalgia.
- 3. Find meeting abstracts about multi-drug resistant tuberculosis. (Hint: Use limits to restrict to the Meeting Abstracts category.)
- 4. Find journal citations about using castor oil to induce labor. I'm particularly interested in articles published prior to 1966. (Hint: Jump to the OLDMEDLINE collection within the Journal Citations category).

Suggested Answers

1. Locate information on holistic health and AIDS or holistic health and HIV.



2. Using the Find Terms feature (MeSH Browser), find items about fibromyalgia.

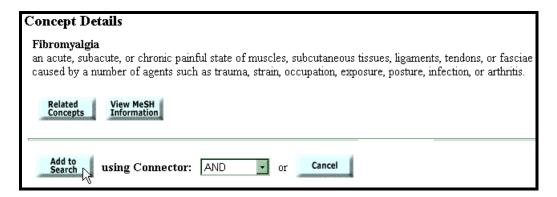
Step 1: Click Find Terms button on the features bar directly below the query box.



Step 2: Type in the term and click the **Find Terms** button.

Find Terms Find terms, their definitions, and related terms, using NLM's MeSH and UMLS Metathesaurus. fibromyalgia • Medical Subject Headings (MeSH) is NLM's controlled vocabulary thesaurus. MeSH terminology provides a consistent way to retrieve information that may use different terminology for the same concepts. • NLM's Unified Medical Language System (UMLS) Metathesaurus contains information about biomedical concepts and terms from many sources.

Step 3: Click on the Add to Search button to add this term to your search query.



Step 4: The Gateway brings the term you added to the query box. Click on Search to run your search.



- 3. Find meeting abstracts about multi-drug resistant tuberculosis. (Hint: Use limits to restrict to the Meeting Abstracts category.)
- *Step 1:* Click on the Limits to reach the Limits screen.



Step 2: Type in the term "multidrug resistant tuberculosis" in the query box at the top of the screen and then select **Meeting Abstracts** from the **Search** pull-down menu. Click **Search**.

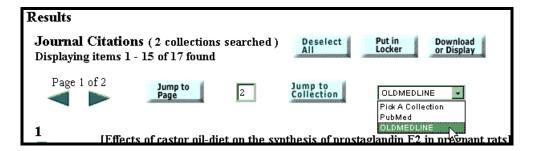


4. Find journal citations about using castor oil to induce labor. I'm particularly interested in articles published prior to 1966. (Hint: Jump to the OLDMEDLINE collection within the Journal Citations category).

Step 1: Type search in query box. Click Search.



Step 2: On Results Display screen, select **OLDMEDLINE** from the **Pick a Collection** pulldown menu. Click on **Jump to Collection**.



<u>NOTES</u>